

A Note on Energy and Post-Capitalism

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1. Preface [FIT2012, 13, 14, 15, 16]

1. First of all there is facts. Facts are something existing now in every form including document or image in brain. They include purpose for the future and the written history of the past.

2. I have been studying **Radical Enumerative Thinking** and **Contradiction** as an attitude and the method of life. RET is to think on the zero-basis by the minimum basic concepts and to think fundamentally to get enumerative granularity of facts or object. [FIT2013, 15, 16]

The basic concepts are object, granularity and enumeration. Object is information cut from facts by perception at a granularity. Attribute which is concrete description of object is also object. **Granularity** is a range or scope in time and/or space and/or attributes, which should be selected from enumerated one. **To enumerate** is to numerate up to a whole without leakage and overlap. Object, adequate granularity and enumeration are decided simultaneously. Logic is relations between objects. Without enumerated granularity we might miss the adequate granularity and adequate logic. [FIT2005/2] [TS2008] [THPJ201501]

Facts or object consists of being and relation. Being consists of matter and idea. [FIT2004, 05/1, 2] [TS2005, 07, 08, 12] Relation is transformed to movement by **energy**.

The movement is the birth or use of something.

We have two ways to realize the birth or use of something. One is to change the existing thought on objects and act. The other is to do so on the zero-basis. [e.g. birth of barter THPJ2012] It is the time to take RET especially the zero-basis thinking.

3. To live is to decide “I-relation-object”. This relation consists of dealing with object objectively with **sense of object** and uniting me and object with **sense of unity**.

“Sense of object” is my will to operate object as an object. The value of this is “liberty” which is defined as to enhance my ability to change object. “Sense of unity” is my will to integrate me and object to re-unite. The value in this sense is “love” which is defined as to enhance me and object including other life simultaneously as an attitude of action. [FIT2013, 16]

4. Already written contents in past papers or quoted one are shown by blue letters. This paper itself is by RET.

2. Two Energy Revolutions and the Value

We had revolutions of energy twice that open the possibility of human being. They are Agricultural Revolution began 8000 years ago and Industrial Revolution began 250 years ago. Both of them are based on energy revolution or rather energy revolutions themselves. [IEICE2016] [FIT2016]

1. The man or woman who first began to raise plant consciously using solar energy have the sense of object for plant and solar energy. **Agricultural Revolution** began.

Since the beginning of Agricultural Revolution agriculture was spread to the World and products was growing up.

Under these condition the time had come to need attitudes in awe of nature, methods to make use of nature and institution such as law to resolve issues on human relations to develop more productivity for every people.

Law or religion become institution which helps to realize a **sense of unity**. But the sense of unity is to nature and “God” is one-sided at this time. [FIT2016]

2. In the **Industrial Revolution** human began to make use of fossil fuel [IEICE2016]. Industrial Revolution was to get fossil fuel which is an accumulation of solar energy and to transform it to energy easy to use by steam engine. Capitalism is the institution to support Industrial Revolution.

Industrial Revolution went on with **the sense of object** which change object efficiently but the sense of object and sense of unity are both **insufficient**. Sense of belonging especially to nation and a sense of possession of today should be reconsidered toward an ideal sense of unity. [FIT2016]

Therefore **individual** was not established until now.

3. Value in the Past and Present with not Enough Energy

1. Action or recognition of human being is done using our energy. And product is a result of our action with energy.

2. Sometime in the midst of Agricultural Revolution when products different by the division of labor of each group growing up, two leaders of groups who happened to be a man and woman wanted products to give and take each other. I guess this is the beginning of barter. [IEICE2012] [THJP2012, 201503] Barter started economy which is a kind of institution. Birth of barter which is to exchange material each other, birth of language which is a medium to exchange information and birth of using atomic power are three big birth invention of human being.

Principle of “equal-values-exchange” [ISZK899-617] in barter and quantity of work or energy as a criterion of value of barter had emerged simultaneously.

1) This made a hypothesis that **value was made by energy or working power**. Working power including maintaining energy of life and operating power which includes power of machine and thought etc. All these are able to come to energy and money. **And energy became a criterion of values in the age when we had not enough energy**. In reality the cost of product has been basically measured according to the working hours. This has been unchanged until now and will not change until the next revolution. Technology, institution [TJ200306], even science and art [OUYOU1990] [THPJ201503] are means which make energy work most efficiently or use minimum energy [FIT2016].

2) This made a series of reasoning, although it is not necessarily true reasoning. 3) This become also a basis of “crime and punishment” and other institution. How to deal with hatred or horrors is an important issue to be solved today.

3. Even intellectual works could be replaced to machine if cost of making and using machine would be cheaper than that of work by capitalism in the situation having not enough energy.

To avoid this we should continue to enhance everyone’s “sense of unity and sense of object”. RET would make it possible.

4. Energy in the Future

1. Human being who eats food which is an accumulation of solar energy to live is first of all physically a material being.

Secondly the way to make use of energy to act is enumerated as 1) to get energy from solar power and transform it to energy easy to use, 2) to get energy in nature such as wood or fossil fuel which is an accumulation of solar energy and transform it to energy easy to use or 3) to get artificial material and transform it to energy easy to use such as atomic power or fuel cell.

2. 1) We cannot completely rely on solar energy or other renewable energy in the future. Because solar energy is based on the premise of stable climate which will not be guaranteed by serious climate change caused by super big volcano eruption, collision of asteroid or above all disappearance of the Sun etc. in the future.

For example a super big volcano eruption in Japan which occurred once in ten thousand years on average can stop solar power generation in the World for a long time at one percent probability in hundred years.

And besides surface of the earth should be basically for photosynthesis of plant and life of animal including human being not for power generation in order to keep the Earth. In the space where we have oxygen around us we can use hydrogen to make energy chemically. Also on the earth we should make power generation using mantle movement as a power source.

2) The period we can use reserves of fossil fuel is only a few hundred years which are only a moment in long human history.

3. 3) We need energy in everywhere and in every time. We should make effort for new energy which is local, safe and available even at the latent environmental crisis and in every space including the universe and deep sea. [FIT2016]

The energy in every space and time could be achieved either by physically, chemically or atomically such as by nuclear fusion. For example human life in Mars might acquire energy from nuclear fusion and plant by chemical photosynthesis.

4. And as even intellectual works could be replaced to cheaper machine, cost of making and using atomic power would become cheaper and cheaper by capitalism, the age of enough and safe energy would begin in the future a few decades later.

5. Ideal Value in the Future with Enough Energy

1. It is the third revolution to build post-capitalism to develop new energy and institutional revolution suitable for the energy development simultaneously. In the age of new energy when safe, cheap and enough energy independent from space and time spread in the universe, **energy** would stop to be a criterion of value. At that time although even life who spent less energy can survive in evolution, we could change any objects and realize **ideal values** without worrying about energy.

2. To live is to decide “I–relation–object”. The utmost ideal relation is “sense of unity and sense of object” [FIT2013]. Post-capitalism should unify “sense of full unity and sense of object” to resolve issues caused by the not unified senses. [FIT2016]

To live also consists of attitudes and actions. These are attitudes at all the times and the actions when we notice the difference between the ideal and the World exceed the threshold which depend on situation. [FIT2013, 2016]

My attitudes should be “relaxed and alert” from a granularity of attitude to myself and “modesty and criticism” from a granularity of attitude to object. My action should be “love and liberty” from a granularity of action. [TS2011] [FIT2013, 2016]

“Relaxed and alert”, “modesty and criticism” and love and liberty” are integrated as “sense of unity not one-sided and sense of object”. [FIT2013]

3. A person having the senses would establish **individual to do effort**. Thinking and action of every diversified individual would realize diversified values by their hard effort. New value would be a series of “continuation of universe- continuation of life of every individual- love and liberty”. The contents of value would be a criterion of value.

It could contribute to the universe. Argument and democracy [ISZK890-606] by RET might continue to discover new truth and new value, enhance value and not necessarily make usual “growth”. The effort for ideal value might become the moving power of work and economy instead of profit. [FIT2016]

6. Conclusive Thoughts

I studied energy and a criterion of value in the past, the present and the future on the basis of RET. Enough and safe energy make us re-think ideal value. Although even in evolution energy play an important role, we could realize ideal values without worrying about energy. This might open a new age.

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<http://www.osaka-gu.ac.jp/php/nakagawa/TRIZ/jpapers/2015Papers/Takahara-2015-NotesABC/Takahara-NoteA-151012.html>
Shorten name means as follows.
TJ: The TRIZ Journal, FIT: Forum on Information Technology, TS: TRIZ Symposium in Japan, THPJ: TRIZ Home Page in Japan, IEICE: Institute of Electronics, Information and Communication Engineer in Japan, yyyy]: year in AD.
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